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ABSTRACT

An overview is provided of articulation activities between the community colleges and secondary schools of California. Part I reviews the progress made in the implementation of: (1) articulated "2 + 2" vocational education projects; (2) the community colleges' provision of academic performance reports to high schools on their graduates; (3) efforts to secure funding for the articulation project; (4) a study to assess the nature and extent of high school/community college efforts statewide; (5) actions by the Academic Senate of the California Community Colleges including the development of a list of competencies expected of entering college freshmen, a curriculum consultants project, and a statement on college preparation for high school students; and (6) various state legislation packages. Part II summarizes the results of the study of high school articulation, revealing that over 65 colleges reported course or program articulation in occupational education, 38 colleges reported some articulation of coursework in the liberal arts, and 101 colleges indicated some form of outreach activities with high schools. Part III presents six recommendations for the Chancellor's Office and the community colleges to further improve articulation. Appendixes include a list of the Articulated 2 + 2 Vocational Education Projects, a more detailed summary of findings from the survey of current articulation efforts, and a draft of the brochure for high school students on community college preparation. (EJV)

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Discussed as Agenda Item 3
at a meeting of the
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January 21-22, 1988

HIGH SCHOOL ARTICULATION

Ronnald W. Farland and Connie Anderson

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Board of Governors of the
California Community Colleges
January 21-22, 1988

HIGH SCHOOL ARTICULATION 3

For Action

Background

This item provides an overview of articulation activities between the community colleges and secondary schools. Several policy recommendations are contained in Part III, and Appendix A contains a proposed brochure for secondary school students (the brochure includes a list of courses which are recommended to prepare students for the community college curriculum). Board members are asked to adopt the policy recommendations and the course preparation recommendations.

This item also:

- updates the Board on progress made in implementing the high school articulation action plan adopted by the Board in October 1986 and describes other statewide high school articulation activities; and
- summarizes the findings of a recent statewide study on high school articulation.

Analysis

Achieving educational excellence in secondary schools is vitally important to community colleges because the quality and comprehensiveness of education received by students in high school directly impacts what courses community colleges teach, what support services are needed, and how community colleges utilize their resources.

In recognition of the importance of high school articulation, the Board of Governors in March 1984 adopted a regulation which required districts, as a condition of receiving state aid, to develop and carry out a policy to articulate their courses and programs with local high schools and colleges (Section 51022 of Title 5). High school articulation was also identified as a priority for action in the 1985, 1986, and 1987 *Basic Agendas.*

During 1986-87, a number of actions were undertaken to strengthen linkages between high schools and community colleges. Joint articulated vocational education projects were funded; progress was made in providing student performance feedback to high schools on a systemwide basis; funding was secured to establish a new High School Articulation Specialist in the Chancellor's Office; and a statewide survey of the nature and extent of high school/community college efforts statewide was conducted. The results of the survey indicate that there has been a rapid expansion in the number of types of articulation efforts statewide.

Recommended Action

The Board should approve the recommendations listed on pages 9 and 10 and endorse the activities to be undertaken by the Chancellor's Office staff in 1987-88 to further improve high school articulation.

The recommendations include a need for community colleges to evaluate the effectiveness of articulation efforts, for local boards of trustees to endorse high school articulation as a priority item, and for community colleges to develop a coordinated strategy for improving articulation with high schools and adult schools. During 1987-88, the Chancellor's Office will convene an ad hoc task group to further define academic policy issues that surfaced from the study and develop a plan to increase communication between the Chancellor's Office and local community colleges regarding high school articulation.

Staff Presentation: *Ronnald W. Farland*
Acting Vice Chancellor, Academic Affairs

Connie Anderson, Dean
Transfer Education and Articulation

Part I: Progress in Implementing the 1986-87 Action Plan

In October 1986, the Board approved a number of actions to be undertaken during the 1986-87 academic year. The following is a report on the implementation of these actions:

Articulated "2 + 2" Vocational Education Projects

Vocational Education Special Project Funds in the amount of $500,000 were jointly allocated in 1987 by the state Department of Education and the Chancellor's Office to support 21 high school/community college vocational education articulation programs. (See Appendix A for a list of the colleges and program areas funded.) These projects are currently under evaluation to assess their progress in meeting program objectives.

For 1988, $900,000 has been committed by the state Department of Education and the Chancellor's Office for continued support of these projects. Applications will be accepted from currently funded projects for implementation of the next phase of the projects.

Academic Performance Reports

Several public policy analyses produced in the past few years by the California Postsecondary Education Commission (CPEC), the Commission to Review the Master Plan, and the segments of education have pointed out the usefulness to high schools of information that tells them how their graduates perform at the college level. Approximately one-third of the community colleges provide such feedback to their local high schools.

The state Department of Education has asked the Chancellor's Office to provide performance information to high schools on a more systematic and systemwide basis to help them assess their effectiveness in preparing students for college. The ability of the Chancellor's Office to produce these performance reports is linked with the progress of the new Management Information System (MIS). The 1987-88 MIS Pilot Project on student and course information provides for the development of course outcome information, a necessary ingredient for the development of the high school performance reports.

1987-88 Funding Proposals

Staff requested $853,200 for 1987-88 to develop competency-based, statewide model curricula for articulated programs in vocational and academic program areas and to fund pilot projects in basic skills articulation. Unfortunately, this budget proposal was not successful. However, the Chancellor's Office did succeed in securing funding and a position for a new High School Articulation Specialist who will join the

Transfer Education and Articulation Unit of the Academic Affairs Division this year. Previously, there was only one specialist position responsible for articulation among the community colleges and high schools. The addition of the new full-time specialist will greatly enhance the ability of the Chancellor's Office to provide leadership in this important area.

Survey on High School Articulation and the Ad Hoc Task Group on High School Articulation

The October 1986 agenda item indicated a *need to assess the nature and extent of high school/community college efforts statewide.* Although there appeared to be a rapid expansion in the number and types of articulation efforts statewide, an inventory of these efforts had not been made, and therefore it was difficult to describe the nature and level of community college efforts to the California Postsecondary Education Commission, the Legislature, and the Department of Finance. In addition, there appeared to be a lack of cohesive information available to community colleges on the types of model programs in the community colleges and the steps colleges should undertake to implement these programs.

To address these needs, the Chancellor's Office contracted with the Rancho Santiago Community College District to conduct a comprehensive study of high school articulation practices among the community colleges. This study is discussed in Part II of this item. Full copies will be distributed to the colleges, to the other segments of education, to legislators, and to other state agencies.

In September 1987, an ad hoc task group of faculty, student service personnel, college administrators, Chancellor's Office staff, research personnel, and state Department of Education staff met to discuss the conclusions of the study and propose recommendations for Board action to further improve high school articulation with the California community colleges. It was on the basis of this consultation that staff developed the recommendations to the Board outlined in Part III of this agenda item.

Other Developments and Activities

Statewide Academic Senate

The Academic Senate of the California Community Colleges has taken a leadership role in promoting increased articulation with high schools. Actions of the Senate include:

Statements of Expected Competencies of Entering Freshmen: In conjunction with the academic senates of UC and CSU, the community college Academic Senate has developed expectation statements that outline competencies of entering college freshmen in English, mathematics, science, and foreign language. Expectation statements in visual and performing arts, in the humanities, and social sciences are

currently being developed. The statements are critical in outlining to high school teachers and students the level of preparation that is needed for success as incoming college freshmen and therefore are important in the development and review of curricula in the high schools.

Curriculum Consultants Project: Last year, a new approach to the accreditation of high schools was undertaken, utilizing postsecondary faculty as curriculum consultants to assist the high schools in conducting a self-study of their various academic disciplines. The Community College Academic Senate, in conjunction with the state Department of Education, took the lead in training and organizing over 200 consultants to be placed at 73 high schools around the state. An additional 600 faculty have volunteered to be assigned to another 126 high schools during 1987-88. An evaluation of the first year of the project has been conducted and shows that the participating schools and the consultants feel the new accreditation process is a very positive and productive means of reviewing and evaluating high school curriculum.

Statement of High School Preparation and the High School Brochure: For the past several years, the state Department of Education, UC, CSU, and the California community colleges have jointly produced and distributed a booklet, *Futures*, for eighth grade students and their parents. *Futures* outlines the course preparation and the skills students should receive in high school to keep their options open and prepare for college-level work.

However, because of the open admission policy of community colleges, high school students still perceive that it is not necessary to complete a college preparatory program prior to attending a community college. With the new Title 5 course standard regulations and the implementation of matriculation, it is crucial for students to recognize the need to prepare in high school for college-level coursework. In response to this need, the Academic Senate, in cooperation with the Chancellor's Office, has developed a draft of a brochure to be distributed to all tenth grade students in California high schools. The brochure outlines the course preparation recommended for high school students to prepare them for any course of study at a community college.

A copy of the draft brochure and the statement of preparation are contained in Appendix C of this item. Following Board approval of this brochure, a pilot test will be conducted and a final brochure design will be developed.

AB 1725 (Vasconcellos, et al.) -- Community College Reform Bill

AB 1725 contains a number of provisions for the improvement of transfer and vocational programs, curriculum articulation, and access of underrepresented high school students to the community colleges. Also included are mandates for the implementation of "2+2" vocational programs (two years in high school and two years in community colleges) and "2+2+2" program (two years each in high school, community college, and the California State University). These programs allow students to move from one educational level to another without having to duplicate

coursework or reestablish levels of competency. AB 1725 also requires that a transfer core curriculum be developed and that specific requirements for collegiate preparation for entry into the core curriculum be published and distributed to junior high and high school students.

In fact, most of AB 1725's recommendations relevant to high school articulation are previously approved Board policy and are currently being at least partially implemented. For this reason, and because the level of prescription outlined in the bill is inappropriate for statutory language, staff will request the Board to approve proposed amendments to strike specific provisions from the bill, thus allowing the Board to determine the details of implementation. Funding to support full implementation of these provisions may come either from appropriations accompanying the bill or from budget requests approved by the Board in September.

AB 3639 (Bradley)

AB 3639 (Bradley) requires that the California Postsecondary Education Commission prepare a report which identifies and describes existing articulation in career-oriented "2+2" and "2+2+2" programs in California. In addition, CPEC has been asked to develop recommendations concerning the implementation of these programs and report back to the Legislature in January 1988. The Chancellor's Office has cooperated with the CPEC study by providing data collected from its Community College High School Articulation Study.

California Association of Community Colleges (CACC), Commission on Instruction

CACC's Commission on Instruction undertook activities during 1986-87 to study and promote articulation with high schools and community colleges. Two conferences on high school articulation were conducted. One conference dealt with public policy issues regarding high school articulation; the other conference highlighted existing articulation programs in California. In addition, the Commission conducted a study of 250 high school districts to assess their perception of articulation practices and other working relationships between these high school districts and their respective community college districts. The Chancellor's Office staff continue to participate in the Commission, and it is expected that increased joint planning and cooperation will enhance opportunities to assist the colleges with their high school articulation efforts.

Part II: High School Articulation Study

The results of the study on high school articulation indicate that there is already a great deal of articulation activity between community colleges and secondary schools in California. Over 65 colleges reported course or program articulation in occupational education, 38 colleges reported at least some articulation of coursework in the liberal arts program areas, and 101 colleges have indicated some form of outreach activities with high schools. Most of the activity reported has been initiated by the community colleges in the past three years, suggesting that the local community colleges have been responsive to the Board of Governors *Basic Agenda* and the recommendations of the Master Plan Commission.

The articulation study outlines how all this new activity is of benefit to students, to the participating institutions, to programs, to student services staff, and to the community and industry (see Appendix B, pp. 6-10).

Since the local high school articulation programs are relatively new, little evaluation has been undertaken at the local and state level to assess their effectiveness or to monitor the flow of students from high schools to community colleges participating in the programs. However, the survey does indicate that colleges which have *model programs* share these common characteristics:

- high school articulation is given high priority by the local board of trustees and the administration of the college;
- there is a coordinated college plan for implementing articulation programs with local high schools, which includes student services, vocational education, liberal arts programs, and programs designed to reach underrepresented students;
- there is faculty participation; and
- the colleges have allocated resources for a staff coordinator for high school articulation.

Clear lines of quality communication also appear to be a key factor for the success of local programs: communication between instruction and student services within the colleges, communication between the colleges and local high schools, and communication to students about the programs and opportunities available to them (see Appendix B, pp. 24-28).

The study also points out the need to expand secondary school articulation efforts into the adult school population. Articulating with adult schools would allow the urban districts to provide a more effective and responsive educational continuum for such diverse student populations as high school dropouts, immigrants, refugees, older adults, persons with handicaps, the unemployed, and the unskilled.

Along with identifying the characteristics of successful articulation, the study also identifies some of the barriers to articulation in California, including: the lack of student awareness; the need for a process/structure of articulation and producing written articulation agreements; the lack of funding for secondary school vocational programs and the challenge this presents for community college vocational educators; and the lack of resources available for both the colleges and secondary schools to become involved in articulation efforts (see Appendix B, pp. 29-33).

In addition, a number of issues regarding high school articulation surfaced as a result of the study. For example, should community college credit be awarded for high school courses that have been articulated as equivalent to community college coursework? What does the term "2+2" really mean and should the term be more broadly defined to include a number of types of articulated curriculum models which exist between high schools and community colleges? Should high school students enrolled in high school articulated courses be held to the same course prerequisites and assessments as community college students enrolled in the equivalent college courses? These and other issues need further study and discussion.

Part III: Recommendations for the Chancellor's Office and the Community Colleges

On the basis of the findings of the High School Articulation Study and the work of the Community College Ad Hoc Task Group on High School Articulation, the following recommendations are made to further improve articulation between high schools and community colleges in California:

Recommendation 1: The Board of Governors should endorse the contents of the high school brochure developed by the Academic Senate and the Chancellor's Office staff (Appendix C) as the Board's policy on recommended high school preparation for community college enrollment.

Recommendation 2: Local boards of trustees should endorse high school articulation as a priority item.

Recommendation 3: Community colleges should develop a coordinated strategy for improving and expanding articulation with high schools and adult schools. The coordinated strategy should include: participation of faculty, student services, and instructional personnel; top-level administrative support; and adequate staff resources and support for the coordination and implementation of the plan.

Recommendation 4: Community colleges should evaluate their high school articulation programs and conduct follow-up studies of students participating in the programs.

Recommendation 5: Community colleges should utilize the brochure containing the Board's policy on recommended high school preparation as part of an overall outreach strategy to improve the preparation of students for community college work.

Recommendation 6: Community colleges should help secondary schools maintain viable vocational offerings through such means as increased facility and equipment sharing; inservice training for faculty and counselors; and the development of revised course content and competency statements in vocational education (to comply with the new high school graduation requirements).

The Chancellor's Office will undertake the following activities during 1987-88 to improve high school articulation:

- an evaluation model will be developed which can be utilized by local districts to assess the success of their local high school articulation programs;
- a plan will be developed to increase communication between the Chancellor's Office and the local community colleges and among the community colleges regarding high school articulation activities and policies;

- an ad hoc task group will be convened to further define the academic policy issues that surfaced from the High School Articulation Study and submit its recommendations for review by the appropriate bodies of the Chancellor's consultation process. In turn, these recommendations requiring Board approval or endorsement should be brought to the Board by the end of the 1987-88 academic year; and

- a brochure containing the recommended high school preparation will be printed and distributed to community colleges for their use in high school articulation efforts.

Appendix A

Articulated 2 + 2 Vocational Education Projects

Phase I - Planning Grants

Educational Agency	Instructional Area(s)
Riverside County	All Areas
Allan Hancock Community College	Word Processing, Secretarial, Accounting, Auto Mechanics, and Auto Body
Saddleback Community College	All Areas
Sweetwater Unified High School District	Auto, Auto Services, and Business
Foothill College	All Areas
Sierra College	Auto Tech, Early Childhood Education, and Electronics
El Camino Community College District	Electronics
Fremont Unified High School District	Word Information Processing and Business Secretarial
South County Community College District	Industrial Tech, Health, and Business
Diablo Valley College	Business
State Center Community College District	All Areas
Palomar College	Drafting, Computer Assisted Design, and Welding
Chaffey College	All Areas

Phase II - Implementation of 2 + 2 Projects

Educational Agency	Instructional Area(s)
San Mateo	Electronics
North Orange County Community College District	Health Technician, Business Education, Home Economics and Related Occupations
Rio Hondo Community College District	Electronics, Office, Nursing
Compton Community College District	Machine Tech, Auto Tech, and Welding
North Santa Clara County ROP	Drafting, Machine Technology, Automotive, Communications Technology, and TV Production
Cerritos Community College	High Technology Curricula, Engineering, Industrial Technology, and Industrial Education
Hartnell College	Computer Science, Drafting, Body and Fender Repair, Auto Tech, Business Education, and others

Phase III - Expansion and/or Institutionalization of the 2 + 2 Projects

Educational Agency	Instructional Area(s)
Los Rios Community College District	Office Administration, Business Administration, Electronics, Auto Mechanics, Forestry, Welding, Accounting, and Computer Science

Appendix B

Building the Bridge for Better Education
A Report on Articulation
California Community Colleges/Secondary Schools

This document summarizes the findings of a survey of California community colleges' current articulation efforts with secondary schools. The survey was commissioned by the Chancellor's Office and conducted through the Department of Institutional Research, Rancho Santiago College. Project Monitor for the study was Connie Anderson, Dean of Transfer Education and Articulation. Project Director for the study was Julie Slark, Director of Institutional Research, Rancho Santiago College. The study was conducted by Julie Slark and Cheryle Elmquist, Project Consultant. It was conducted from April 1, 1987, to August 1, 1987, and the funding source was the Vocational Education Act, Title IIB.

Study Background

In March 1984, the Board of Governors of the California Community Colleges adopted a regulation which required community college districts to develop and carry out a policy to articulate their courses and programs with local high schools and other colleges (Section 51022 of Title 5). The Board identified articulation with secondary schools as a priority for action in the 1985 and 1986 *Basic Agendas*.

In May 1985, an agenda item, *Facilitating Transfer and Articulation*, was brought before the Board. It provided a conceptual framework for viewing the issues of transfer and articulation and outlined an action plan for facilitating articulation with high schools and four-year colleges. This framework was based on the assumption that the enhancement of transfer is an intersegmental responsibility and that responsibility at the college level cuts across organizational lines, from instruction, to student services, to research and analysis.

In September 1986, an information item, *High School Articulation*, was presented to the Board and updated the recent developments at the state and local levels regarding high school articulation and outlined an action plan for improving articulation among secondary schools and community colleges in 1986-87. As part of this plan, the Board described a *need to assess the nature and extent of high school-community college efforts statewide*. To complete this assessment, a survey of community colleges was conducted.

Purpose of the Study

The principal objectives for this study included:

- documentation of the need for articulation with secondary schools (from a review of the literature);
- description of the types of articulation activities currently being conducted between California community colleges and secondary schools;
- assessment of the current level of articulation efforts with secondary schools statewide;
- identification of colleges with exemplary articulation programs and a description of those programs;
- review of the resources available to support articulation efforts;
- definition of criteria which contribute to successful articulation programs;
- identification of barriers which inhibit articulation programs becoming formalized or institutionalized; and
- description of the benefits of articulation for California's community colleges and secondary schools.

Study Methodology

The study methodology included three primary work tasks:

1. a review of the literature pertinent to secondary school/community college articulation;

2. a survey of the community colleges to assess the nature and extent of secondary school/community college articulation activities; and

3. on-site interviews with 15 community colleges that have exemplary articulation programs with secondary schools.

A questionnaire was mailed to all community college presidents in May 1987 with a cover letter from Chancellor Joshua Smith explaining the purpose and scope of the study. All 106 colleges responded to the study, with 101 colleges returning completed questionnaires, two colleges returning incomplete questionnaires, and three colleges returning blank questionnaires (indicating they had no articulation activity with secondary schools at this time). The on-site interviews with colleges having exemplary articulation programs was designed to provide in-depth descriptions of some successful articulation programs and activities. The criteria used to select the colleges interviewed included: types of current articulation activities being conducted; levels and documentation of articulation efforts; unique articulation programs targeting special population groups; and the need to obtain a demographically, geographically, and programmatically representative sample of colleges statewide.

The colleges interviewed included Allan Hancock College, Butte College, DeAnza College, Hartnell College, Imperial Valley College, Los Angeles Pierce College, Los Rios Community College District, Mt. San Antonio College, Rancho Santiago Community College District, Rio Hondo College, San Diego City College, San Francisco Community College District, San Mateo Community College District, Santa Barbara City College, and Southwestern College.

Definition of Articulation

For the purpose of this study, the process of *articulation* between community colleges and secondary schools includes activities in both instructional programs (vocational and liberal arts) and student services.

> **Articulation** is a planned process linking two or more educational systems together to help students make a smooth transition from one level to another. In an instructional context, articulation is a systematic process which permits students to move from one course or program level to another without experiencing a delay or duplication of learning. In an administrative and student services context, articulation is a program of activities which help students successfully make the transition into the college environment.

The Need for Articulation with Secondary Schools

In 1983, the National Commission on Excellence in Education published its *Nation at Risk*. This report brought national attention to the growing illiterate population, the declining quality of education in our schools, and the increasing need for remedial education. In California, special attention needs to be paid to the increasing high school dropout rate, the lack of high school preparation necessary for students to make a successful transition into college, and the underrepresentation of minority and low-income students in postsecondary education. These are challenges that cannot be borne by the secondary schools alone, but must be met at all levels of the educational continuum.

For postsecondary institutions, the challenge to achieve educational excellence in the elementary and secondary schools has perhaps the greatest significance for community colleges. The quality and comprehensiveness of education received by students in the elementary and secondary years directly affect what courses community colleges teach, how community colleges use their resources, the level at which faculty can present courses, and the public image of the quality of community college offerings.

Secondary school/community college articulation is an opportunity for the two educational systems to work together to meet the challenge for improved educational excellence and will give many underrepresented and disadvantaged students the opportunity to succeed.

The Benefits Achieved with Successful Community College/Secondary School Articulation Programs

How Articulation Benefits Students

Articulation:

- Encourages enrollment and retention in secondary school, ROP and community college curriculum.
- Helps students gain a more positive attitude toward school, become more responsive, show more enthusiasm and interest in the classroom, and creates self-confidence in students.
- Enhances job opportunities for the student by identifying student job qualifications and by helping students acquire specific marketable job skills.
- Eases student transition from the secondary school to the community college setting.
- Helps to better prepare students for a college-level curriculum.
- Helps to define career goals.
- Eliminates coursework duplication, thus reducing costs for both the student and the institution.
- Provides incentives to continue education/training at a more advanced level.
- Helps students gain a more realistic picture of what is expected of them and a better understanding of how education is associated with the real world.
- Allows some students to receive college credit and/or advanced placement through successful completion of articulated courses at the secondary school.

How Articulation Benefits Instructors

- Provides secondary school instructors with first-hand information about community college programs and capabilities.

- Provides community college faculty with information about secondary school and ROP programs and capabilities.
- Provides renewed cooperation, understanding, and respect among instructors.
- Helps instructors to see how their courses fit into the overall course of study.
- Improves communication within subject-area disciplines.
- Builds self-esteem in that instructors can see both the student and the program succeed.
- Develops formalized recruitment policies and procedures.

How Articulation Benefits the Participating Institutions

- Provides an opportunity for cooperating secondary schools and community colleges to *pool* resources and/or to share facilities for the purpose of educating students in articulated areas of the curriculum.
- Promotes better utilization of existing equipment, materials, and facilities.
- Increases visibility of the community college in the community and enhances its image.
- Establishes improved atmosphere for cooperation in areas of personnel development, policy development, and other instruction-related areas.

How Articulation Benefits Student Services Staff

- Provides advisement information to help students with educational planning.
- Provides the high school counseling and advisement staff with current information about the community college.
- Provides assessment, placement, orientation, and counseling services to ease the transition from high school to the community college.

How Articulation Benefits Programs

- Programs will be more relevant.

- Programs will receive more support.
- Provides the opportunity for programs to keep abreast of the *state-of-the-art* technology through continued training of instructors, shared equipment, staff, and facilities.

How Articulation Benefits the Community and Industry

- Reduces the overall cost of education to the taxpayer by providing a more cost-effective educational process.
- Can improve communication with prospective employers.
- Provides better-trained workers for specific areas of work.
- Provides industry with increased opportunities for direct input into curriculum and training programs, thus making programs more relevant to their specific industry.

Summary of Study Findings

In general, the study findings indicate substantial interaction and outreach activities taking place between community colleges and secondary schools. However, because the formal process of articulation with secondary schools is a relatively new activity for community colleges and, in many cases, the structure has not been formalized, it is difficult to distinguish between the new level of effort being committed to secondary school articulation and those traditional community college services related to outreach and counseling.

Thus, to establish the level of new effort being committed to secondary school articulation, we have distinguished between those activities which are a result of some *formal* or comprehensive planned articulation process and those activities which may result from the more traditional outreach interactions between the community colleges and secondary schools for a long time (traditionally associated with routine recruitment and student counseling activities).

Each of the following activities are the result of a college-wide commitment to articulation. To initiate these activities, the colleges had to make a conscientious commitment to the process of articulation with secondary schools. If we conclude that a college reporting to have 9 or more of the 13 articulation characteristics listed below has made a strong commitment to secondary school articulation, then 31 colleges, or just less than a third of the state's community colleges, have made a strong commitment to a comprehensive articulation program with secondary schools.

Number of Colleges Reporting Activities Resulting from a "Formal" or Planned Articulation Process

Administrative/Institutional Commitment

73 Colleges have articulation efforts directed by top administration.
43 Colleges have secondary school articulation written into their goal and mission statement and consider it a top priority.

Articulation Council/Articulation Coordinator

59 Colleges participate with secondary schools using a local articulation counselor.
48 Colleges/Districts have an articulation coordinator specifically responsible for articulation programs with secondary schools.

Instructional Program or Course Articulation

65 Colleges reported some course or program articulation in occupational education.
38 Colleges reported some articulation of coursework in the liberal arts program areas.

Written Articulation Agreements

37 Colleges have formal articulation agreements at the administrative level with the secondary schools.
33 Colleges have formal articulation agreements at the program level with the secondary schools.

Establishing Goals, Planning, and Organizational Structure

33 Colleges have a district-level articulation plan with local secondary schools.
29 Colleges have a written plan for secondary school articulation with goals and program objectives.
37 Colleges have a written organizational chart describing areas of responsibility for articulation activities.

Faculty Involvement

29 Colleges have inservice training programs for secondary school faculty.
21 Colleges provide faculty *release time* for development of articulation materials.

Tutoring

26 Colleges provide tutoring for secondary school students.

Student Services and Other Secondary School Outreach Activities

Student services have been identified as providing some of the most important elements of articulation, especially for the *high risk* or disadvantaged student. In their report, *Background for Expanding Educational Equity*, the Intersegmental Policy Task Force on Assembly Concurrent Resolution 83 identified strongly articulated student services as one of the 9 specific elements characterizing schools which have been effective in increasing the educational attainment of low-income and minority students:

> They offer intensive and even *intrusive* student counseling and academic advising, in order to coordinate each student's educational experiences by proper course planning, identify students who need special academic assistance, and provide aid in submitting college admission and financial aid applications.

All of the following activities represent outreach efforts with the secondary schools and provide essential student services for successful student assessment, orientation and transition into the college environment. Many of the colleges have initiated and are conducting these student services activities as an integrated part of a planned college-wide articulation program. However, these activities also represent services that have been ongoing for some time as a student services function.

Number of Colleges Reporting Student Services and Other Outreach Activities with Secondary Schools

Outreach and Counseling Activities

101 Colleges reported some outreach with secondary schools.
90 Colleges reported faculty dialog in liberal arts.
99 Colleges provide pre-admission advisement services (including information on Extended Opportunity Programs and Services (EOPS) and financial aid) for secondary school students.
96 College counselors meet with secondary school counselors.

Location of College Courses

96 Colleges enrolled secondary school students in courses at the college.
64 College courses are available to secondary school students at the secondary school.

Facility Sharing Between Institutions

75 Colleges share facilities with local secondary schools.

Student Information

63 Colleges have brochures for secondary school students, describing the preparation needed for college entry.

Assessment Testing

63 Colleges perform assessment testing of students in English in secondary schools.
60 Colleges perform assessment testing of students in math in secondary schools.
51 Colleges report *freshman* student academic progress (grades) back to the secondary schools.
36 Colleges report *freshman* student assessment scores back to secondary schools.

Articulation of Occupational Curricula

Of the 103 questionnaires returned, 65 colleges reported current articulation activity in at least one vocational area (and many colleges named more than one area). Most articulation activity is taking place on a course-by-course basis, as compared to being articulated as a *full curriculum sequence* that leads to an associate degree or certificate.

The subject areas most frequently reported as being articulated include:

Business: 41 colleges reported some articulation of courses or programs with secondary schools in Business Education and 31 colleges are in the planning stages.

Automotive: 32 colleges reported having current articulation activity in 5 program or course areas. Fully articulated curriculum programs were most often cited for Auto Body, Auto Mechanics and Auto Technologies.

Electronics: 16 colleges reported articulation efforts in Electronics. Electronics was the second most frequently listed program area having fully articulated curriculum programs.

Drafting: 16 colleges reported having current articulation activity in Drafting, Computer-Assisted Design, or Computer-Assisted Manufacturing.

The Computer Sciences and Allied Health areas were most often identified for future articulation activity. Only eight colleges reported current articulation activities in the Computer Sciences, but fifteen colleges are in the planning stages and seven colleges indicated a desire to develop articulated courses in this area. In Allied Health, only seven colleges reported current articulation activity, but eleven

colleges are in the planning stages and an additional twelve colleges want to develop articulated programs in Health Occupations.

"2+2" and "2+2+2" Articulated Curriculum: The terms "2+2" and "2+2+2" are frequently used in the literature to describe articulated programs in occupational education. The definition of a "2+2" program usually involves a structured technical program which coordinates the last two years of high school and the first two years of postsecondary education in a competency-based program. However, it is clear from these study results that there is not a clear understanding regarding the criteria for "2+2," versus the process of developing written articulation agreements. Also, although many persons in the field are very supportive of vocational education articulation, they feel that the concept of "2+2" is too limiting. For example, a time-shortened articulated program could be a "2+1" program.

Of the 65 colleges who reported having articulated coursework in at least one vocational area, only 34 colleges reported having written program agreements. Of these, 15 colleges reported having "2+2" programs in one or more occupational program areas and two colleges (Cerritos and American River), reported having "2+2+2" programs. In reviewing the study results, it is evident that the distinction of a "2+2" program is dependent on the college's interpretation of "2+2" -- with some colleges interpreting the necessary criteria in a more structured or disciplined setting than others.

If *having or developing a "2+2+2" program* is going to be used in policy development, as a criteria for funding, or as a tool for evaluation, the definition for what constitutes a "2+2" program should be resolved and documented for the field.

Number of Students Participating in Articulated Vocational Coursework: There was very little information provided on the number of students enrolled in articulated courses or the number of students who have successfully completed the secondary school portion of the articulation program. This is primarily due to the short period of time these programs have been operational. Only fourteen colleges reported having articulated programs in occupational curricula prior to 1986.

For those colleges that did report student numbers, the data were frequently noted as *unreliable*. This study found no documented reporting systems to monitor the student flow from the secondary schools to the community colleges and no student evaluation systems to monitor success of the articulated programs. Developing the student follow-up systems necessary to document the success of community college-secondary school articulation programs, both in terms of number of students transferred and individual student achievement, should be a priority.

Methods of Advancing Credit for Articulated Coursework: Unlike the previous section, the majority of colleges responded to this question, with 61 colleges indicating that secondary school students were given advanced placement at the community college for successful completion of articulated coursework in the secondary school; 56 colleges reported that secondary school students could receive college credit by challenge examinations, and 52 colleges allowed acceleration to a certificate for completion of community college courses taken while in secondary school.

However, when discussing the methods of advancing credit for articulated coursework with the colleges, it is found that each college has established its own credit policy and there is no consistency regarding the criteria for awarding college credits. Furthermore, the articulation credit notations and codes used on the college transcript vary from college to college. These inconsistencies in reporting the articulated course credits and in establishing the policies regarding how college credit is awarded could have adverse repercussions when these same units are used for transfer to a four-year college or for compliance with the new community college associate degree course standards.

Impact of Lack of Funding for Secondary School Vocational Programs on the Colleges' Ability to Articulate Occupational Curricula: As a result of the new statewide high school graduation requirements, many secondary schools are experiencing a decrease in funding for vocational programs. Numerous colleges have cited this lack of vocational program offerings as having a negative impact on their ability to articulate vocational courses with the secondary schools. In addition, with decreased vocational program offerings at the secondary schools and with increased graduation requirements in basic education, many secondary school students are finding it more difficult to achieve their educational goals in vocational education.

Through active secondary school and community college articulation activities, community colleges can help the secondary schools maintain viable vocational offerings and meet their students' needs in vocational education. To accomplish this, community colleges and secondary schools need to develop alternative avenues for providing vocational education. Some of the possible methods include increased facility and equipment sharing; faculty and counseling inservice; and the development of revised course content and competency statements in vocational education to comply with the new high school graduation requirements.

Articulation of Liberal Arts Curricula

Even though there is a substantial amount of informal articulation activity in the liberal arts disciplines (90 colleges report some informal faculty dialog or interaction), formal course articulation in terms of having written course

agreements is relatively limited as compared to the agreements developed for occupational curricula. Only 38 colleges reported some articulated coursework with secondary schools in one of the liberal arts program areas. One reason for this may be the lack of funding to develop formalized articulation agreements.

Unlike vocational education, there is very little statewide funding available for the development of liberal arts articulation agreements. In California, this may change with the new high school graduation requirements and the increased emphasis placed on student *preparedness* and basic skills. Having an active articulation program in the liberal arts instructional disciplines provides many of the same benefits as articulation in occupational education. With enhanced faculty-to-faculty communication, there is better curriculum coordination between courses, thus eliminating student repetition of coursework at the community college. Secondary school and community college faculty can work together to better prepare students for college-level coursework and both faculties can participate in inservice staff development, which results in better teaching methods.

Articulation activities were most frequently reported in math, with 26 colleges reporting some articulated coursework. Inservice training for high school math instructors was frequently reported as a valuable ongoing articulation activity. The second most frequently articulated area was English, with 17 colleges reporting some articulated coursework and 60 colleges reporting some faculty dialog and interaction. Having faculty dialog and interaction was reported by a majority of the colleges for each of the remaining liberal arts disciplines (science, foreign language, fine arts, and history-social science), but the number of colleges reporting articulated coursework in these areas was less than 15.

Articulation in the Special Student Programs

The importance of active articulation efforts with specially targeted student population groups has been acknowledged throughout the state, especially in recommended actions to strengthen the college preparation and increase the college level of achievement of low-income and underrepresented ethnic minority students. As limited funding sources are available for special programs targeting these groups, it is also important to maximize the effectiveness of these developmental programs.

With this funding, a specific program can be very effective in helping a few chosen students to be successful. However, in addition to fulfilling the requirements of the special funding sources, it should be imperative that the programs designed for a few be evaluated for those components that could be implemented, or mainstreamed, into the general working process of the college.

The study has identified the following articulation activities in special student programs:

Underrepresented Students

53 Colleges have special programs for underrepresented secondary school students.

Summer-Bridge Programs

51 Colleges have summer-bridge transition programs (EOPS) for secondary school students.
26 Colleges have summer-bridge transition programs (non-EOPS) for secondary school students.

Gifted Students

46 Colleges have special programs for gifted secondary school students.

Gender Equity

34 Colleges have special programs to identify and support gender equity in specific articulated curricula.

Disabled Students

23 Colleges have special programs for secondary school students with disabilities.

Articulation with Intermediate and Adult Schools

Although this study does not assess articulation efforts with adult education providers, the need to expand secondary school articulation efforts into the adult school population was identified as a priority by participants from two exemplary colleges.

45 Colleges have reported some articulation activities with adult schools.
50 Colleges have reported some activities with intermediate schools.

In *The Challenge of Change*, the Master Plan Commission reaffirmed the role of the community colleges in sharing the responsibility for adult education with the public schools. They also concluded that "adult literacy training and basic skills education are expected to join English as a Second Language and remediation as the most difficult challenges facing California education in the next fifteen years."

Fifteen districts in the state are the sole providers of state-supported noncredit adult education in their districts. The largest of these include San Francisco, San Diego,

Rancho Santiago, and North Orange. These four districts account for nearly two-thirds of the state's community college noncredit enrollment.

These districts have the organization in place to link adult noncredit continuing education, and the more traditional college credit offerings. This linkage would allow the urban districts to provide a more effective and responsive educational continuum for such diverse student populations as high school dropouts, immigrants. refugees, older adults, persons with handicaps, the unemployed, and the unskilled. Establishing a policy and committing the resources to provide the linkages between adult noncredit and the traditional college credit institutions should be considered within the context of secondary school articulation and transfer.

Criteria for Successful Articulation Programs

In order of priority, the study findings identified the following characteristics as important for successful articulation programs:

- Top administrative commitment/leadership.
- Faculty interaction and involvement.
- Communications.
- Student services.
- Resources.
- Articulation coordinator/officer.
- Planning for articulation and establishing goals and objectives.
- Articulation structure and process.

Top Administrative Commitment/Leadership: This is clearly perceived as the most important characteristic for successful articulation with 40 colleges giving this a #1 priority and a total of 54 colleges listing this as an important characteristic. The importance of top-level administrative leadership and commitment is consistently referred to in the literature and was mentioned repeatedly during the on-site college interviews. Having a top administrator from each institution actively and visibly involved sends a message of institutional commitment to the faculty and staff and helps validate the entire program.

Faculty Interaction and Involvement: Next to administrative commitment, faculty involvement is seen as the most important characteristic for successful articulation. The specific attributes of faculty interaction and involvement include the need to involve faculty early in the process; the importance of faculty-to-faculty dialog; the necessity for frequent and regular meetings between secondary school and community college faculty; the value of inservice training for both high school and college faculty; and the need for faculty release time to develop and document written course agreements.

The nature and extent of faculty involvement varies from college to college. Hartnell's articulation model has given their faculty a unique opportunity to take an active role in recruiting high school students into their program areas. Working with the high school instructors, the college faculty have the opportunity to go into the classroom and talk directly with the students about the benefits of attending college, the academic preparation needed for college, and the opportunities available in their program area. District high school instructors have said that having college faculty in their classrooms is a very effective way to motivate their students to continue on to the college. In this model, articulation provides the tools and support mechanisms for faculty recruitment of high school students.

Communications: Forty-one colleges listed communications among the top three most important characteristics for the success of their articulation programs. The three primary components included under communication are:

1) the facilitation of dialog and communication between administration, staff, and faculty;

2) the facilitation of dialog and communication between the community college and secondary schools; and

3) the dissemination of information to the community, students, and parents.

The importance of establishing open lines of communication cannot be overemphasized. It is cited in the literature as *critical*, *essential*, and one of the *real benefits* of secondary school articulation. Open communication and dialog establishes mutual trust and respect between participants and helps to build the *partnership environment*.

The third component of communication is the need for dissemination of information about articulation programs to students, parents, and the community. The most frequently reported barrier for students attempting to take advantage of articulation programs and services was the lack of student awareness about the programs. These results would indicate a real need in the areas of preparation and dissemination of program information to secondary students.

Student Services: The importance of having community college/secondary school counselors integrated into the planned articulation process cannot be overemphasized. Active articulation efforts benefit the counselors with staff development and inservice training and keep professionals informed of current programs and capabilities. Counselors have responsibility for implementing instructional articulation agreements and therefore must be informed regarding these agreements. In many programs, counselors are the most frequent contact with the secondary schools and maintain the flow of information between students, parents, the business community, and instruction. Some of the colleges have implemented successful inservice training programs for high school counselors.

Resources: Implementation of successful articulation programs requires time and staff support. Many respondents identified the lack of staff time as one of the most significant barriers to implementing programs. Also, there is a need for release or reassigned time to develop written agreements and to implement articulation programs. Clerical support is necessary to help with coordination of articulation activities and preparation of the written articulation agreements.

Articulation Coordinator/Officer: Many colleges with successful articulation programs identified having a full-time articulation coordinator as imperative for an active and effective articulation program. This person has the responsibility for total coordination of articulation activities between the college and the participating secondary schools.

In addition to having an articulation officer or coordinator, several colleges also identified the need to have clerical support for this position.

Planning Articulation and Establishing Goals and Objectives: In developing goals and objectives, it is important to have participation from both the secondary school district and the college. This will ensure *ownership* on the part of the school district for the program. The goals and objectives of the program must be student centered, not process centered. As one educator wrote, "Agreements, per se, are not the goal; student success is!"

An effective plan for implementing the articulation program must be developed and should outline specific activities and responsibilities. There should be a clearly defined process and a plan for developing program agreements. It is recommended that articulation efforts start small, be successful, and expand to other areas. The articulation program should be reviewed on an annual basis.

The Articulation Structure and Process: Having an Articulation Council, written articulation agreements, and formal articulated curricula are necessary and essential to the process of *institutionalizing* secondary school articulation. In an instructional context, the ultimate goal of formalized articulation activities is a written curriculum agreement. In a student services and administrative context, the ultimate goal is a written plan, a goal statement, or a written commitment to secondary school articulation. However, it should be noted that the process of developing and documenting these agreements may take a long time (two to three years).

In comparing the priority of importance ratings at this point in time, the majority of colleges have given a higher value of importance to establishing commitment, developing communication, and encouraging faculty involvement in the articulation process, rather than developing and documenting the structural components of articulation.

The majority of study respondents have given top priority to establishing institutional commitment and building relationships as the most important characteristics for successful articulation. On a statewide level, this could represent the current stage of development on the part of most California community colleges in their efforts to build secondary school articulation programs.

Barriers to Articulation in California

This study identified barriers facing secondary school students who attempt to take advantage of articulated programs and barriers encountered by secondary schools in attempting to offer articulated programs. The barriers identified in this study are similar to those cited in the literature: turf protection, staff and/or faculty resistance to change, inability to coordinate schedules, lack of resources, poor community college image, and lack of communication.

However, the study findings differ from the literature in the priority of importance given the barriers. The literature frequently cites *turfism* and/or *faculty resistance to change* as the most significant barriers to overcome in articulation. In these findings, *turfism* and *faculty resistance to change* are the **least** mentioned problems.

The most significant barriers to successful articulation reported in this study were:

(1) a lack of student awareness and ineffective communications; and

(2) the lack of a process/structure for producing written articulation agreements.

Barriers to Articulation -- The Study Findings

The list of barriers to articulation identified in this study include:

- *Communication/Awareness*
  - Student Awareness
  - Communication
- *Process/Curriculum*
  - The Articulation Process
- *Lack of Funding for Secondary School Vocational Programs*
- *Environmental Factors*
  - Transportation
  - Conflict with Scheduling
  - Number of Available Students
- *Lack of Resources*
  - College Resources
  - Secondary School Resources
- *Negative Attitudes/Resistance*

Administrative
College Faculty
Secondary School Faculty

Lack of Communication/Student Awareness: The most frequently cited barrier for both students and secondary schools was the lack of student awareness of programs and services. There is a need to develop and disseminate materials describing secondary school articulation to students, parents, and the general community.

Process/Curriculum: The next most frequently mentioned barrier to articulation were problems associated with the process of designing and implementing an articulation program and producing the corresponding written articulation documents. Course articulation is a problem for students in attempting to comply with specific course requirements or inconsistent course curricula. Methods of awarding credit for completed articulated coursework were also identified as problem areas.

The majority of problems expressed for the participating institutions are those encountered in the development and documentation of written articulation agreements, specifically the differences in course curriculum and trying to *match* course content. Even though it is a major problem area, the comments presented reinforce the importance of formalizing the articulation process with written agreements.

Impact of Lack of Funding for Secondary School Vocational Programs (SB 813): Several colleges reported, in both the questionnaire results and interviews, that many of the secondary schools are experiencing decreased funding for vocational programs due to the new high school graduation requirements. This is having a negative impact on their ability to articulate vocational courses with the high schools for two reasons: students have less time to take elective vocational courses, and the secondary schools are having to reduce their offerings of vocational courses.

Implementation of the new secondary school graduation requirements is a response to the well-documented need to improve basic skills and better prepare secondary school students. Active secondary school/community college articulation programs can be used to address the impact of these new high school graduation requirements on secondary school vocational education programs. The solutions will require resourceful thinking and innovative new program developments.

Some of the ways in which community colleges could help secondary schools maintain viable vocational offerings are through formalized tech-prep programs, facility and equipment sharing, faculty and counseling inservice, and facilitating the development of revised course content and competency statements in vocational education to comply with the new high school graduation requirements.

Environmental Barriers: These barriers include lack of transportation within the college service areas, difficulty in coordinating schedules for meetings and faculty workshops between the college and secondary school staff, and the lack of students available to take courses.

Scheduling coordination is identified as the most significant environmental barrier. In general, secondary school instructors have little flexibility in their class schedule; thus substitutes need to be obtained, or meetings have to be held in the late afternoons or evening.

Lack of Resources: The lack of resources for both the college and secondary school has a negative impact on implementing articulation. The lack of staff time is the primary barrier for colleges. It is generally agreed that to maintain the level of coordination and communication necessary to implement a successful articulation effort at all levels of the institution, a full-time articulation coordinator is essential, preferably one with secretarial support.

For the secondary schools, there is a lack of funding and equipment for vocational programs and a lack of time for student counseling.

Negative Attitudes/Resistance: Included under this heading is the lack of top administrative commitment, faculty resistance to change, *turf* protectionism, and negative attitudes on the part of the high school instructors regarding the community college and the college faculty regarding the ability of secondary school faculty to teach. All of these barriers can be overcome with open communication, regular meetings, and a conscientious effort to build relationships of mutual respect and trust. These problems were the **least mentioned** barriers reported by the study respondents.

Appendix C: High School Brochure

California Community Colleges

A Guide for High School Students

California's 106 community colleges offer a wide range of programs for students who want to transfer to a four-year college or learn special job skills. In addition to offering small classes and excellent teaching, community colleges are close to home and inexpensive to attend.

Last year 1.2 million students enrolled in California's community colleges. Over 43,000 received their associate degrees, and more than 60,000 transferred to a four-year college to work toward a higher degree.

You can join them!

Why You Should Prepare for College Now

Although you may not have made up your mind about college, or college may seem a long way off, you should begin to plan now. Planning your courses while you are in high school can prevent losing time in college. You will also learn the skills you need for college-level classes.

In the next section we have listed the high school courses we recommend to prepare you for college. Even if you decide not to go to college, these same classes will prepare you for many excellent career opportunities.

Check with your counselor to be sure your schedule meets your high school's graduation requirements.

Recommended Courses

English	You are strongly encouraged to take four full years of English. These classes should emphasize writing, reading, and speaking.
Mathematics First-Year Algebra Geometry Second-Year Algebra Advanced classes such as Trigonometry, Math Analysis, Calculus, and Statistics	First-year algebra, geometry, and second-year algebra are strongly recommended. Plan to take a course in 12th grade so you'll be ready for college math.
Social Science U.S. History, World History, Government/Civics. Other available courses such as Economics, Psychology, Anthropology, and Geography.	An understanding of U.S. history and government is good preparation for college.
Science Biology, Chemistry, Physics. Other available classes such as Oceanography, Geology.	Take at least two years of science classes that include laboratory work.
Foreign Language Spanish, French. Other classes such as Latin, German, Hebrew, Japanese.	You are encouraged to take at least two years in the same foreign language.
Fine Arts Art, Dance, Drama, Music	Courses in the fine arts help you discover enjoyable new activities and help make you a well-rounded person.
Electives	Electives such as speech, a computer class, or typing are also very useful, as are classes that introduce you to new career opportunities.

Skills You Will Need in College

When you enter college, your instructors will be looking for the skills listed below. You can take advantage of opportunities in high school to develop and express these skills.

- **Listening**

  You will need to understand class lectures and identify the most important parts.

- **Speaking**

  Since you will be called upon to express your ideas orally, you should volunteer to answer questions in class and take part in group discussions.

- **Studying**

  Concentrate upon improving your organizational skills and your use of time.

- **Reading**

  Become an active, involved reader. You should be able to identify main points, separate fact from opinion, and reach appropriate conclusions.

- **Writing**

  You should be able to write a clear, well-developed essay that persuades, compares or tells a story. Your sentences should show variety and contain few errors.

- **Mathematics**

  Take courses that improve your problem-solving skills in arithmetic, decimals, and the metric system.

- **Computers**

  You will find computer skills extremely useful. Try to learn to use the computer for writing essays.

- **Thinking/Reasoning**

  Seek experiences such as debating, planning projects, and tutoring others. Take courses that force you to think hard, come up with reasons, ask many questions, make your own decisions, and explain complicated things to others.

You Can Attend.

Community college enrollment in California is open to any person with a high school diploma, any person age 18 or older, or anyone who can benefit from a college education. Academically prepared students are also permitted to enroll in advance placement and vocational courses while still attending high school.

For More Information . . .

Talk to your high school counselor and discuss :

- Vocational education programs
- Programs that prepare you for a four-year college.
- Costs and financial aid.
- Location of the community college nearest you.

Prepared by the Academic Senate of California Community Colleges in cooperation with the California Community Colleges Chancellor's Office.

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